

**Table S1.** Details of species included in phylogenetic analysis

Taxa	Voucher ID	GenBank Accession Numbers		
		ITS	<i>trnS</i> - <i>trnG</i>	<i>ndhF</i> - <i>trnL</i> <sub>(UAG)</sub>
<i>Barleria acanthoides</i> Vahl	Boulos & al. 16678 (E)	MK066127	MK066177	MK089855
<i>Barleria argentea</i> Balf.f.	Tripp & Kelbessa 896 (RSA)	MK066128	MK066178	MK089856
<i>Barleria argillicola</i> Oberm	Balkwill, McDade, Balkwill, Goyder 11655 (J)	MK066129	MK066179	MK089857
<i>Barleria aristata</i> I.Darbysh	Carter, S. & al. 2272	MK079656	MK066173	MK089858
<i>Barleria aucheriana</i> Nees	Miller, A.G. 7651	MK066130	MK066180	MK089859
<i>Barleria baluganii</i> Ensermu	Tripp 915 (RSA)	MK066131	MK066181	MK089860
<i>Barleria bispinosa</i> Vahl	Wood, J.R.I. 1371	MK066132	MK066182	MK089861
<i>Barleria boehmii</i> Lindau	Bidgood, S. & al. 7679	MK066133	MK066183	MK089862
<i>Barleria bolusii</i> Oberm	McDade 1298 (J)	MK066134	MK066184	MK089863
<i>Barleria bremekampii</i> Oberm	McDade 1303 (J)	MK066135	MK066185	MK089864
<i>Barleria cristata</i> L.	Hu, S.Y. & But, P. 23180	-	MK066186	MK089865
<i>Barleria cristata</i> L.	BKF189455	KT004472	-	-
<i>Barleria dulcis</i> Benoist	Du Puy, B. & al. MB187	-	MK066224	MK089907
<i>Barleria</i> sp. aff. <i>dulcis</i> Benoist	Du Puy, Du Puy, Carlson & Andrianantiana MB803	-	MK066187	MK089866
<i>Barleria grandiflora</i> Dalzell	Kameswara Rao 85	MK066137	MK066189	MK089868
<i>Barleria grandipetala</i> De Wild	Bidgood & al. 7952	MK066138	MK066190	MK089869
<i>Barleria grandis</i> Hochst ex Nees	Friis, I. & al. 13075	MK066139	MK066191	MK089870

<i>Barleria grootbergensis</i> I.Darbysh. & E.A.Tripp	Tripp & Dexter 1963 (RSA)	MK066140	MK066192	-
<i>Barleria heterotricha</i> Lindau	Tsepang Makolela 2 (J)	MK066141	MK066193	MK089872
<i>Barleria hildebrandtii</i> S.Moore	Thulin, M. & al. 7690	MK066142	MK066194	MK089873
<i>Barleria involucrata</i> Nees	P. Davidar s.n. (Pondicherry University)	MK066143	MK066195	MK089874
<i>Barleria kaloxytana</i> Lindau	Tripp & Dexter 824 (RSA)	MK066144	MK066196	MK089875
<i>Barleria kitchingii</i> Baker	Daniel 10415 (CAS)	MK066145	MK066197	MK089876
<i>Barleria lancifolia</i> T.Anderson	Balkwill, McDade, Balkwill, Goyder 11664 (J).	MK066146	MK066198	MK089877
<i>Barleria leandrii</i> Benoist	Labat & Deroin 2304	MK066147	MK066199	MK089878
<i>Barleria limnogeton</i> S.Moore	Bidgood, S. & al. 7094	MK079657	MK066174	MK089879
<i>Barleria lupulina</i> Lindl	Daniel 10469 (CAS)	MK066149	MK066201	MK089881
<i>Barleria lupulina</i> Lindl	McDade s.n. (J)	MK066150	MK066202	-
<i>Barleria mackenii</i> Hook.f	Tripp 786 (RSA)	MK066151	MK066203	MK089882
<i>Barleria maclaudii</i> Benoist	Adam, J.G. 20001	MK066152	MK066204	MK089883
<i>Barleria meeuseana</i> P.G.Mey	Tripp & Dexter 1953 (RSA)	MK066153	MK066205	MK089884
<i>Barleria meeuseana</i> P.G.Mey	Tripp 4069 (RSA)	-	-	MK089899
<i>Barleria merxmuelleri</i> P.G.Mey	Tripp 4097 (RSA)	MK066163	-	MK089900
<i>Barleria meyeriana</i> Nees	McDade & Balkwill 1245 (J)	MK066154	MK066206	MK089885
<i>Barleria monticola</i> Oberm.	Balkwill, McDade & Balkwill 11651 (J)	-	MK066207	MK089886
<i>Barleria mutabilis</i> I.Darbysh	Boane, C. 21	MK066136	MK066188	MK089867
<i>Barleria nitida</i> Nees	Weerasoonya & Samarasinghe 7028 (E).	MK066155	MK066208	MK089887

<i>Barleria obtusa</i> Nees	Balkwill, McDade, Balkwill, Goyder 11654 (J).	MK066156	MK066209	MK089888
<i>Barleria oenotheroides</i> Dum.Cours.	Hammel & al. 26092 (RSA).	MK079659	MK066176	MK089890
<i>Barleria oenotheroides</i> Dum.Cours.	Darbyshire, I. 592	MK079658	MK066175	MK089889
<i>Barleria ovata</i> E.Mey. ex Nees	Balkwill, Balkwill, Goyder & Paton 10856 (J).	MK066157	MK066210	MK089891
<i>Barleria parvispina</i> Benoist	Daniel & al. 10406 (CAS)	MK066158	MK066211	MK089892
<i>Barleria popovii</i> Verdc.	Miller, A. G 8694	-	MK066213	MK089893
<i>Barleria prionitis</i> L.	L.H. Cramer 4849 (BKF)	MK066159	MK066212	MK089894
<i>Barleria pseudosomalia</i> I.Darbysh.	Bidgood, S. & al. 1001	MK066160	MK066214	MK089895
<i>Barleria puberula</i> Benoist	Phillipson, P.B. & al. 4147	MK066148	MK066200	MK089880
<i>Barleria quadrispina</i> Lindau	Friis, I. & al. 10719	MK066161	MK066215	MK089896
<i>Barleria richardsiae</i> I.Darbysh	Bidgood, S. & al. 5602	MK066162	MK066216	MK089897
<i>Barleria saxatilis</i> Oberm.	Balkwill & al. 11669 (J).	-	MK066217	MK089898
<i>Barleria splendens</i> E.A.Bruce	S. Bidgood & al. 6287	MK066164	MK066218	MK089901
<i>Barleria strigosa</i> Willd.	Suddee & al. 857 (BKF).	MK066165	MK066219	MK089902
<i>Barleria subregularis</i> I.Darbysh.	Bidgood, S. & al. 958	MK066166	MK066220	MK089903
<i>Barleria taitensis</i> S.Moore.	McDade 1263 (J).	MK066167	MK066221	MK089904
<i>Barleria trispinosa</i> (Forssk.) Vahl	Friis, I. & al. 10625	MK066168	MK066222	MK089905
<i>Barleria ventricosa</i> Hochst. ex Nees	Friis, I. & al. 13136	MK066169	MK066223	MK089906
<i>Barleria whytei</i> S.Moore	Robertson, A.A. 7623	MK066170	MK066225	MK089908

<i>Barleria wilmsiana</i> Lindau	Balkwill, Balkwill, Goyder & Paton 10900 (J).	MK066171	MK066226	MK089909
<b>Outgroup</b>				
<i>Crabbea acaulis</i> N.E.Br.	Balkwill & al. 11649 (J).	EU528885	EU528953	MK089910
<i>Crabbea migiurtina</i> (Chiov.) Thulin	Thulin & al. 10665 (UPS).	EU528888	EU528959	MK089911
<i>Crabbea thymifolia</i> (Chiov.) Thulin	Thulin & al. 10650 (UPS).	EU528874	EU528939	MK089854
<i>Lasiocladus villosus</i> Benoist	Daniel 10427 (CAS)	MK066172	MK066227	MK089912
<i>Lepidagathis chiapensis</i> Acosta	Daniel 8374 (CAS)	EU528897	EU528975	MK089914
<i>Lepidagathis scabra</i> C.B.Clarke	McDade & Balkwill 1238 (J).	EU528896	EU528974	MK089913
<i>Lepidagathis uxpanapensis</i> (Acosta) Kameyama	Garcia 539 (ARIZ).	EU528898	EU528977	MK089916
<i>Lepidagathis sessilifolia</i> (Pohl) Kameyama ex Wassh. & J.R.I.Wood	Daniel & al. 10106 (CAS).	-	EU528976	MK089915
<i>Schaueriopsis variabilis</i> Champl. & I.Darbysh.	Q. Luke 12527 (K).	-	MK066228	MK089917

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